05569.0004.DVUS11

Application No. 10/803,622 Filed: March 18, 2004

I. Amendments to the Claims

1. (Withdrawn) A filamentous bacteriophage particle displaying on its surface a binding

molecule which has a binding domain able to bind target epitope or antigen, wherein the binding

domain of the binding molecule consists of a dAb fragment, the particle containing nucleic acid

with a nucleotide sequence encoding the binding molecule.

2. (Withdrawn) A filamentous bacteriophage particle according to claim 1 wherein the

binding molecule is synthetic.

3. (Withdrawn) A filamentous bacteriophage particle according to claim 2 wherein the

nucleotide sequence encoding the binding molecule is provided by combining unrearranged V

segments with D and J segments.

4. (Withdrawn) A filamentous bacteriophage particle according to claim 1 wherein the

nucleotide sequence encoding the binding molecule is derived by in vitro mutagenesis of an

existing antibody coding sequence or pre-existing phage antibodies.

5. (Withdrawn) A filamentous bacteriophage particle according to claim 1 wherein the

nucleotide sequence encoding the binding molecule is derived from a peripheral blood

lymphocyte.

6. (Withdrawn) A filamentous bacteriophage particle according to claim 1 wherein said

nucleic acid is comprised in a phagemid genome within the filamentous bacteriophage particle.

7. (Withdrawn) A filamentous bacteriophage particle according to any one of claims 1 to 6,

which is in a population of filamentous bacteriophage particles displaying a population of said

binding molecules having a range of binding specificities.

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8. (Withdrawn) A population of filamentous bacteriophage particles according to claim 7

displaying a population of said binding molecules having a range of binding specificities.

9. (Currently Amended) A method for producing a binding molecule specific for a

particular target epitope or antigen, which method comprises the steps of:

producing a population of filamentous bacteriophage particles displaying at their surface

a population of binding molecules, wherein each binding molecule in the population of binding

molecules has a binding domain and the population of binding molecules has a range of binding

specificities, wherein the binding domain of the binding molecules consists of an antibody heavy

chain variable domain with the structure of FR1-CDR1-FR2-CDR2-FR3-CDR3-FR4, and

wherein each filamentous bacteriophage particle contains nucleic acid with a nucleotide

sequence encoding the binding molecule expressed from the nucleic acid and displayed by the

particle at its surface;

selecting for a filamentous bacteriophage particle displaying a binding molecule with a

desired specificity by contacting the population of filamentous bacteriophage particles with a

target epitope or antigen so that individual binding molecules displayed on filamentous

bacteriophage particles with the desired specificity bind to said target epitope or antigen.

10. (Withdrawn) A method according to claim 9 wherein the binding molecules are

synthetic.

11. (Withdrawn) A method according to claim 10 wherein nucleotide sequences encoding

the binding molecules are provided by combining unrearranged V segments with D and J

segments.

12. (Withdrawn) A method according to claim 9 wherein the nucleotide sequences encoding

the binding molecules are derived by in vitro mutagenesis of an existing antibody coding

sequence or pre-existing phage antibodies.

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13. (Original) A method according to claim 9 wherein the nucleotide sequences encoding the binding molecules are derived from peripheral blood lymphocytes.

- 14. (Original) A method according to claim 9 wherein said nucleic acid is comprised in a phagemid genome within each filamentous bacteriophage particle.
- 15. (Original) A method according to any one of claims 9 to 14 additionally comprising separating bound filamentous bacteriophage particles from the target epitope or antigen.
- 16. (Original) A method according to claim 15 additionally comprising recovering separated filamentous bacteriophage particles displaying a binding molecule with the desired specificity.
- 17. (Original) A method according to claim 16 additionally comprising

producing in a recombinant system by expression from nucleic acid derived from said separated particles the binding molecule, or a fragment or derivative thereof with binding specificity for the target epitope or antigen, separate from filamentous bacteriophage particles.